TABLE V-8
PROBLEM & NEED/GOAL/OBJECTIVE/CANDIDATE ACTION RELATIONSHIPS

TRANSPORTATION PROBLEMS & NEEDS	CORRIDOR-WIDE ITS GOALS	USER SERVICE OBJECTIVES	ITS CANDIDATE ACTIONS	PRIORITY LEVEL
Limited Financial Resources	acceptance encourage high level public/ policy-level encourage public/private sector investment reinforce the economic benefits of transportation	leveraging funding sources identifying and securing investment partners evaluating and improving current processes and regulations	***Institutional Issues Functional Area***	
			proactive legislative/organizational change campaign for positive changes/ promotion of technological advances	early action
			Public/Private Partnerships Functional Area	
			high capacity transmission systems through joint rights-of-way usage	early action to medium term
Congestion **Road Closures** **No Alternate Routes**	enhance traveler mobility promote transit usage/ improve transit service use existing advanced technologies in innovative ways	increasing operational capacity reducing delays reducing peak period automobile/truck demand developing better access developing incident and congestion management strategies creating "competitive" travel times/modes advancing traffic operations management and control reducing unnecessary trip-making	***Traffic Management/Operations Functional Area***	
			automation of Eisenhower Tunnel area 3:1 lane split operation	longer term
			extension of Eisenhower Tunnel area 3:1 lane split operation	medium term
			upgraded ITS TOCs (Hanging Lake; Eisenhower) to establish regional traffic management and control	early action
			high occupancy and/or slow-moving vehicle lanes/ramps with automated entry/exit controls	longer term
			remote video surveillance for improved monitoring and response	medium term
			vehicular probes with 2-way communications links to regional TOCs	early action
			automatically selected/implemented regional incident/congestion management plans for recurrent and non-recurrent events	early action
			toll collection systems for peak period travel at high-congestion location/times	longer term
			automated surveillance/enforcement of peak period travel restrictions	medium term

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Inadequate Communications Systems	augment communications/ user interface use existing advanced technologies in innovative ways	gathering, processing, and disseminating reliable condition data advancing traffic operations management and control evaluating and improving current processes and regulations developing new staff capabilities (training/hiring specialists)	***Communication System Functional Area***	
			upgrade voice/data communications	early action
			cellular reporting program	early action
			traffic message channels	early action
			Data Collection/Aggregation Functional Area	
			upgrade computer equipment and VMS for automated message handling	early action
			develop data fusion algorithms for multiple applications	early action to medium term
Inefficient Management of Goods Movements **Commercial Vehicle Use of the Corridor**	enhance traveler mobility increase safety use existing advanced technologies in innovative ways reinforce the economic benefits of transportation	reducing peak period automobile/truck demand strengthening management/ oversight of commercial vehicle operations monitoring hazardous materials transport and overheight/overweight commercial vehicles evaluating and improving current processes and regulations	***Commercial Vehicle Operations Functional Area***	
			automate Dumont/Downieville port of entry	early action
			upgrade Eisenhower Tunnel overheight vehicle detection systems	medium term
			integrate I-70 surveillance/enforcement systems into multi-state one-stop shopping program	early action to medium term
Limited Confidence in State Government Services **Lack of Coordination/ Cooperation**	encourage high public/ policy-level acceptance augment communications/ user interface	evaluating and improving current processes and regulations creating and supporting a cooperative working environment educating all stakeholders developing new staff capabilities (training)	***Education/Training Functional Area***	
			educational program to "sell" ITS and its potential benefits	early action
			corridor-wide public acceptance program to inform local interests about ITS developments and actions	early action
			in-house programs to cross-train current staff in ITS operations and maintenance functions	early action to medium term
			extension of CDOT ITS Implementation Team to include other public and private sector organizations	early action

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Ineffective Information Dissemination	enhance traveler mobility increase safety augment communications/ user interface promote transit usage use existing advanced technologies in innovative ways	reducing delays reducing accident frequency disseminating reliable weather/ road/traffic condition data educating all stakeholders reducing unnecessary trip-making	***Traveler Information Systems Functional Area***	
			highway advisory radio (HAR) and variable message sign (VMS) systems to disseminate information to traveling public	early action
			real-time traveler information kiosks and broadcasts at public and private facilities (non-transportation)	medium term
			intelligent rest stops	longer term
			real-time weather/road/traffic information distribution via the media	early action to medium term
Shortage of Transit Services	enhance traveler mobility improve environmental quality promote transit usage/ improve transit service	increasing operational capacity augmenting transit/bicycle/ pedestrian facilities, service, and accessibility developing multi-modal opportunities	***Public Transportation/Alternate Modes Functional Area***	
			multi-modal transfer centers with traveler information kiosks and links to TOCs and other public facilities	early action to medium term
			automated tracking of public transportation vehicles to improve scheduling and management of services	medium term
			communication links and vehicle sensors for private transit shuttles to serve as probes throughout corridor	medium term
			Traveler Information Systems Functional Area	
			intelligent bicycle system	longer term
			automated transit referral service for public and private service providers	early action to medium term
Environmental Impacts	improve environmental quality	capturing economic benefits reducing vehicle emissions creating and supporting a cooperative working environment	***Environmental/Economic Impact Functional Area***	
			mobile emissions testing stations and advisory signage at high-pollution sites	medium term
			voluntary vehicle retrofit to alternative fuel systems by agencies/private organizations	medium term
			coalition of governments/businesses to exchange economic development strategies	early action

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			Emergency Response Functional Area	
			courtesy patrols for high-incident segments within the corridor	early action to medium term
			alternative service roads for emergency access	medium term
			automated answering/dispatch system for coordinated regional response	early action to medium term
		reducing delays	***Safety/Warning Systems Functional Area***	
Recurring Incidents at Known Locations		reducing accident frequency and severity	accident investigation pull-outs at know high incident locations	early action to medium term
Poorly Delineated/ Maintained Travel Ways	increase safety	reducing emergency response times	retrofit lighting/reflective coatings in tunnel bores; lighted guidance systems	medium term
Lack of Personal Travel Security	use existing advanced technologies in innovative ways	developing incident management strategies	corridor-wide 2-way emergency call boxes	early action to medium term
Vehicular/Animal Conflicts		gathering, processing, and disseminating reliable road/weather/traffic condition data	sensor/detector actuated warning and predictive systems for pavement surface and weather conditions	early action to medium term
Driving Inexperience/ Excessive Speeds		evaluating and improving current processes and regulations	automatic avalanche/rock slide detection/warning systems at high-hazard locations	longer term
			personal in-vehicle MAYDAY systems	early action
			sanding/storm water runoff sensor systems	longer term
			excessive speed warning systems	early action to medium term
			animal alert warning system	medium term